



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------|-------------|----------------------|---------------------|------------------|
| 10/572,402 | 10/02/2006 | Takaaki Miyoshi | 1830.1019 | 8012 |
| 21171 | 7590 | 09/03/2008 | EXAMINER | |
| STAAS & HALSEY LLP | | | MAKSYMOKO, JOHN M | |
| SUITE 700 | | | | |
| 1201 NEW YORK AVENUE, N.W. | | | ART UNIT | PAPER NUMBER |
| WASHINGTON, DC 20005 | | | 1796 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 09/03/2008 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|---------------------------------------|---------------------------------------|
| Office Action Summary | Application No. 10/572,402 | Applicant(s) MIYOSHI ET AL. |
| | Examiner John M. Maksymonko | Art Unit 1796 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-20 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 20060316, 20070921.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1 of the instant application recites the limitation "copper" in line 3 of the claim. There is no indication that this is anything other than elemental copper. In claim 3, the copper limitation is expanded to include copper compounds.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-11, 13-17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyoshi et al. (US 2003/0134963) in view of Peters (EP 0747436).

Regarding claims 1-11, 13-17, and 19-20, Miyoshi discloses a resin composition containing at least two polyamide 6,6s ([0037]) one of which contains 30 ppm copper ([0149]) and the other which may contain none ([0042]), a polyphenylene ether (PPE) comprising a mixture of two or more PPEs ([0051]), thereby inherently having different Mws, or a mixture of functionalized ([0053-0054]) and non-functionalized PPE, at least one partially hydrogenated ([0080]) ABA block copolymer ([0079]) comprising styrene and conjugated diene 9[0076-0077]) and a number average molecular weight of 246,000 ([0157]), about 1-10 ppm (0.001 pbw of PA is ~3ppm: [0044]) of a copper compound according to the formula (Cul: [0043]), and 0.1-3 % ([0114]) carbon black ([0108]) as well as molded articles comprising the composition and used as exterior parts for vehicles ([0002-0003]).

The reference does not disclose the weight average molecular weight of the PPE component(s).

Peters teaches a PPE/Polyamide blend (Abstract) stabilized with a copper salt (Page 5, Lines 45-47), impact modified with a hydrogenated block copolymer (Page 6, Lines 10-15) and made conductive by the addition of carbon black (Table 1) which utilizes a PPE having a Mw of from 20,000 to 80,000 (Page 3, Lines 2-3) in order to prepare a resin having improved melt strength and good impact and tensile strength (Page 2, Lines 20-21).

As both Miyoshi and Peters relate to PPE/Polyamide blends, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the PPE of Peters in the resin of Miyoshi for the purpose of preparing a resin having improved melt strength and good impact and tensile strength (Peters: Page 2, Lines 20-21).

Regarding the limitations in claim 1 directed to the continuity and dispersity of the phases, as there is nothing to indicate that applicant's mixing method is anything other than standard melt mixing, the phases would inherently separate into disperse and continuous phases as claimed.

Regarding the method limitations recited in claim(s) 9 and 13, the examiner notes that even though a product-by-process is defined by the process steps by which the product is made, determination of patentability is based on the product itself. In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). As the court stated in Thorpe, 777 F.2d at 697, 227 USPQ at 966 (The patentability of a product does not depend on its method of production. In re Pilkington, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969). If the product in a product-by-process claim is the same as or obvious

from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.).

Regarding claims 15 and 16, it is noted that the claim calls for “up to 300 ppm” of the iron compound, therefore making it an optional component.

Regarding the limitations in claims 19 and 20, statements in the claims reciting the purpose or intended use of the claimed invention which do not result in a structural difference (or, in the case of process claims, manipulative difference) between the claimed invention and the prior art do not limit the claim and do not distinguish over the prior art apparatus (or process). See, e.g., *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963); *In re Sinex*, 309 F.2d 488, 492, 135 USPQ 302, 305 (CCPA 1962). If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and cases cited therein, as it has been held that the recitation of a new intended use for an old product does not make a claim to that old product patentable. *In re Schreiber*, 44 USPQ2d 1429 (Fed. Cir. 1997). See also MPEP § 2111.02 and § 2112 - § 2112.02.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyoshi et al. (US 2003/0134963) in view of Peters (EP 0747436) as applied to claim 1 above, and further in view of Nakagawa et al. (US 2004/0157978).

Regarding claim 12, modified Miyoshi discloses all of the limitations of claim 1 as set forth above. Additionally the reference discloses the PPE being a copolymer of 2,6-

dimethylphenol and 2,3,6-trimethylphenol ([0048]). The reference does not explicitly disclose the mass % of each monomer unit.

Nakagawa teaches a PPE/Polyamide blend wherein the PPE is a copolymer of about 80-90 % 2,6 dimethylphenol and about 10-20% 2,3,6-trimethylphenol ([0037]) in order to prepare a resin which is remarkably improved in toughness particularly tensile elongation and multiaxial impact strength while maintaining the flowability and heat resistance of polyamide/PPE alloys (Abstract).

As both modified Miyoshi and Nakagawa relate to PPE/Polyamide blends, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the copolymer of Nakagawa in the resin of Miyoshi for the purpose of preparing a resin which is remarkably improved in toughness particularly tensile elongation and multiaxial impact strength while maintaining the flowability and heat resistance of polyamide/PPE alloys (Nakagawa: Abstract).

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyoshi et al. (US 2003/0134963) in view of Peters (EP 0747436) as applied to claim 17 above, and further in view of Ito et al. (US 6,572,721).

Regarding claim 18, modified Miyoshi discloses all of the limitations of claim 17 as set forth above. The reference is silent, however, to the molded article having a radius of curvature of from 200-400 mm.

Ito teaches an automobile panel (Abstract) having a radius of from 150-300 mm (Column 3, Lines 59-61) in order to conform to the curved surface at the top of an automobile (Column 1, Lines 11-12).

As both modified Miyoshi and Ito relate to automobile panels, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mold the articles of modified Miyoshi to the curve radius of Ito for the purpose of conforming to the curve at the top of an automobile (Ito: Column 1, Lines 11-12).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Maksymonko whose telephone number is (571)270-3239. The examiner can normally be reached on Monday-Thursday, 7:00AM-4:30PM, and alternating Fridays 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM
19 August 2008

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796